

10/10/00

jc923 U.S. PTO

Country	Year	Population (millions)	Urban population (millions)	Urban population (%)	Population density (per sq km)	Urban population density (per sq km)	Population growth rate (%)	Urban population growth rate (%)	Population growth rate (%)	Urban population growth rate (%)	Population growth rate (%)	Urban population growth rate (%)
Algeria	1980	11.0	4.0	36.4	10.0	10.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	1985	11.5	4.5	39.1	10.5	10.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	1990	12.0	5.0	41.7	11.0	11.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	1995	12.5	5.5	44.0	11.5	11.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2000	13.0	6.0	46.2	12.0	12.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2005	13.5	6.5	48.1	12.5	12.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2010	14.0	7.0	50.0	13.0	13.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2015	14.5	7.5	51.7	13.5	13.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2020	15.0	8.0	53.3	14.0	14.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2025	15.5	8.5	54.8	14.5	14.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2030	16.0	9.0	56.3	15.0	15.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2035	16.5	9.5	57.6	15.5	15.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2040	17.0	10.0	58.8	16.0	16.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2045	17.5	10.5	60.0	16.5	16.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2050	18.0	11.0	61.1	17.0	17.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2055	18.5	11.5	62.2	17.5	17.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2060	19.0	12.0	63.2	18.0	18.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2065	19.5	12.5	64.1	18.5	18.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2070	20.0	13.0	65.0	19.0	19.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2075	20.5	13.5	65.9	19.5	19.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2080	21.0	14.0	66.7	20.0	20.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2085	21.5	14.5	67.4	20.5	20.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2090	22.0	15.0	68.2	21.0	21.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2095	22.5	15.5	68.9	21.5	21.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2100	23.0	16.0	69.6	22.0	22.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2105	23.5	16.5	70.2	22.5	22.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2110	24.0	17.0	70.8	23.0	23.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2115	24.5	17.5	71.4	23.5	23.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2120	25.0	18.0	72.0	24.0	24.0	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2125	25.5	18.5	72.6	24.5	24.5	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2130	26.0	19.0	73.1								

Please type a plus sign (+) inside this box →

PTO/SB/05 (4/98)  
Approved for use through 09/30/2000 OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No

First Inventor or Application Identifier

Title

Express Mail Label No.

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents

ADDRESS TO:

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 
  - Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure

3.  Drawing(s) (35 U.S.C. 113) [Total Sheets 

4. Oath or Declaration [Total Pages 
  - a.  Newly executed (original or copy)
  - b.  Copy from a prior application (37 C.F.R. § 1.63(d)(2) and 1.33(b)(3))
    - i.  DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application  
see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b)(3)

5. ☐ Microfiche Computer Program (*Appendix*)
6. Nucleotide and/or Amino Acid Sequence Submission  
(*if applicable, all necessary*)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

### ACCOMPANYING APPLICATION PARTS

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
9. ☐ English Translation Document (if applicable)
10. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. ☐ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
13. ☐ \* Small Entity Statement(s) ☐ Statement filed in prior application, Status still proper and desired  
(PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
15. ☐ Other: \_\_\_\_\_

\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

- 16. If a CONTINUING APPLICATION,** check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. \_\_\_\_\_ /

Prior application information: Examiner: \_\_\_\_\_ Group / Art Unit: \_\_\_\_\_  
**For CONTINUATION or DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 17. CORRESPONDENCE ADDRESS

☐ *Customer Number or Bar Code Label*

(Insert Customer No. or Attach bar code label here)

or ☒ Correspondence address below

Name \_\_\_\_\_

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*Address*

220 W 98<sup>th</sup> St #2B

City

New York

State

154

Zin Code

10025

Country

15

Telephone

973 677 2277

Fax

973 672 7534

Name (PrintType)

Registration No (Attorney/Agent)

**Signature**

Date \_\_\_\_\_

**Burden Hour Statement:** This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

# FEE TRANSMITTAL for FY 2000

Patent fees are subject to annual revision.  
Small Entity payments must be supported by a small entity statement,  
otherwise large entity fees must be paid. See Forms PTO/SB/09-12.  
See 37 C.F.R. §§ 1.27 and 1.28

TOTAL AMOUNT OF PAYMENT (\$)

## Complete if Known

Application Number

Filing Date

First Named Inventor

Examiner Name

Group / Art Unit

Attorney Docket No.

## METHOD OF PAYMENT (check one)

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to.

Deposit  
Account  
Number

Deposit  
Account  
Name

☐ Charge Any Additional Fee Required  
Under 37 CFR §§ 1.16 and 1.17

2. ☐ Payment Enclosed:

☒ Check ☐ Money Order ☐ Other

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$)	Code (\$)	Code (\$)	Code (\$)	Code (\$)	Fee Description	Fee Paid
101	690	201	348		Utility filing fee	355
106	310	206	155		Design filing fee	
107	480	207	240		Plant filing fee	
108	690	208	345		Reissue filing fee	
114	150	214	75		Provisional filing fee	

SUBTOTAL (1) (\$)

### 2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-20** =	X	
Multiple Dependent	-3** =	X	

\*\*or number previously paid, if greater; For Reissues, see below

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$)	Code (\$)	Code (\$)	Code (\$)	Code (\$)	Fee Description	Fee Paid
103	18	203	9		Claims in excess of 20	
102	78	202	39		Independent claims in excess of 3	
104	260	204	130		Multiple dependent claim, if not paid	
109	78	209	39		** Reissue independent claims over original patent	
110	18	210	9		** Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) (\$)

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$)	Code (\$)	Code (\$)	Code (\$)	Code (\$)	Fee Description	Fee Paid
105	130	205	65		Surcharge - late filing fee or oath	
127	50	227	25		Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130		Non-English specification	
147	2,520	147	2,520		For filing a request for reexamination	
112	920*	112	920*		Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*		Requesting publication of SIR after Examiner action	
115	110	215	55		Extension for reply within first month	
116	380	216	190		Extension for reply within second month	
117	870	217	435		Extension for reply within third month	
118	1,360	218	680		Extension for reply within fourth month	
128	1,850	228	925		Extension for reply within fifth month	
119	300	219	150		Notice of Appeal	
120	300	220	150		Filing a brief in support of an appeal	
121	260	221	130		Request for oral hearing	
138	1,510	138	1,510		Petition to institute a public use proceeding	
140	110	240	55		Petition to revive - unavoidable	
141	1,210	241	605		Petition to revive - unintentional	
142	1,210	242	605		Utility issue fee (or reissue)	
143	430	243	215		Design issue fee	
144	580	244	290		Plant issue fee	
122	130	122	130		Petitions to the Commissioner	
123	50	123	50		Petitions related to provisional applications	
126	240	126	240		Submission of Information Disclosure Stmt	
581	40	581	40		Recording each patent assignment per property (times number of properties)	
146	690	246	345		Filing a submission after final rejection (37 CFR § 1.129(a))	
149	690	249	345		For each additional invention to be examined (37 CFR § 1.129(b))	

Other fee (specify)

Other fee (specify)

\* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

## SUBMITTED BY

Name (Print/Type)

HUGH LOSBNER

Signature

[Signature]

Registration No.  
(Attorney/Agent)

## Complete (if applicable)

Telephone

973 672 2277

Date

Oct 10 2000

## WARNING:

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Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR**

Docket Number (Optional)

Applicant, Patentee, or Identifier: HUGH LOEBNER

Application or Patent No. \_\_\_\_\_

Filed or Issued: \_\_\_\_\_

Title: Weighted Pulley System Crawl Control Stanchion

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☒ the specification filed herewith with title as listed above.  
☐ the application identified above.  
☐ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☐ No such person, concern, or organization exists.  
☐ Each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

Hugh Loebner  
NAME OF INVENTOR

NAME OF INVENTOR

NAME OF INVENTOR

[Signature]  
Signature of inventor

Signature of inventor

Signature of inventor

Oct 10 2000  
Date

Date

Date

## WEIGHTED PULLEY SYSTEM CROWD CONTROL STANCHION

### BACKGROUND OF THE INVENTION

This invention relates to crowd control portable stanchion posts. Crowd control stanchions are portable post assemblies used by maintenance and other individuals to regulate pedestrian traffic. The stanchions are placed in a manner to indicate to pedestrians where the pedestrians should walk or queue.

Stanchions are generally not used singly. Flexible or rigid connecting members such as chains, ropes, tapes or rails are usually used to connect stanchion posts to each other, usually in a linear fashion, or to wall mounted rings. Most connecting members are independent. Independent connecting members can be removed from the stanchions. These independent connecting members have hooks or snaps at both ends to facilitate attaching the connecting members to stanchions.

Some stanchions, however, have extendible and retractable guidance tapes that are internally stored within a housing attached to, or part of, the stanchion. I use the term guidance tape to refer to an extendible tape have means to connect the tape to another stanchion or a wall mounted ring. The guidance tape is wound onto a reel that comprise part of the stanchion assemblies. These guidance tapes can be extended from the stanchion post by unwinding them from the reels. The virtue of a stanchion with an extendible internally stored guidance tape is convenience. First, there is no need to store the connecting member separately. The guidance tape is internal to the stanchion and stored with it. The guidance tape can not be lost. Second, an extendible guidance tape can be used to delineate any distance up to the maximum extension of the guidance tape. It is not necessary to stock multiple length connectors since the guidance tape can be extended as far as desired up to the maximum extension.

Said reels have spring mechanisms to keep the guidance tapes taut when extended and to rewind the guidance tapes after use. Extending the guidance tape causes the spring to be wound, storing potential energy in the spring. When it is desired to rewind the extended guidance tape, the stored potential energy spins the reel rewinding the guidance tape.

Although guidance tape stanchion posts with internal guidance tapes are convenient, spring rewind mechanisms have limitations. First, if a simple spring mechanism is used, the tension on the guidance tape will not be constant. As the guidance tape is extended, the spring will be wound tighter and the tension will increase. Constant force springs mechanisms reduce this problem to some degree, but they require additional complexity and expense. Second, spring mechanisms can, and frequently do, break. Breakage renders the guidance tape mechanism inoperable. Third, the guidance tapes in present systems are stored and extended in a vertical aspect. This results in a tendency for the top of the guidance tape to curl. The curling is exacerbated by the proclivity of pedestrians, when standing next to an extended guidance tape to hold and press down upon the top of the guidance tape, thereby causing even greater curling.

## WEIGHTED PULLEY SYSTEM CROWD CONTROL STANCHION

Fourth, releasing a completely extended guidance tape may cause it to rewind with excessive speed. Braking means are possible but these increases cost and complexity. Finally, the longer the desired length of a guidance tape, the greater the necessary diameter of the reel. A large reel on the top of a stanchion post may be considered unsightly, limiting the maximum length of the guidance tape.

## SUMMARY OF THE PRESENT INVENTION

My invention comprises a portable stanchion post using gravitational potential as energy storage means to retract an extended guidance tape. A weighted pulley means, rather than a spring, is used both to store gravitational energy for maintaining tension when the guidance tape is extended, retracting the guidance tape when desired, and as means to store the retracted guidance tape within the stanchion post.

The art of pulley design and construction is well known. Pulleys allow heavy objects to be hoisted with a force less than the weight of the object at the expense of having to move the force a greater distance than the weight to be moved. A pulley system with a five fold mechanical advantage, for example, can theoretically be used to lift a 100 lb. weight with a force of only 20 lbs., but the 20 lb. force must be moved through a distance 5 times the distance that the weight is lifted. In reality, a force of more than 20 lbs. would be needed to overcome energy lost through friction.

Although the use of the pulley to lift heavy weights is ancient and well understood, it is not generally appreciated that the system can be used in reverse. A comparatively large force can be moved through a short distance to move a lesser force through a longer distance. That is the essence of the present pulley stanchion system.

The weighted pulley system comprises a top block assembly and a bottom block assembly. Each block assembly comprises a block, that is a case, and a plurality of rollers that are held within the case. The top block assembly comprises, in addition to the plurality of rollers, a ring to which a snap end can be attached and a threaded stud to which a decorative finial may be attached. The bottom block assembly comprises, in addition to the plurality of rollers, a weight and a membrane.

The guidance tape is stored as multiple plies laced between the two block assemblies. When the guidance tape is extended from the stanchion, the bottom block assembly rises. When the directional guidance tape is retracted the bottom block assembly drops within the post. The distance that the bottom block assembly rises and falls relative to the distance that the guidance tape is extended depends on the number of plies of the guidance tape. For every inch that the bottom block assembly rises or falls, the guidance tape will extend or retract  $N$  inches, where  $N$  is the number of plies.

### WEIGHTED PULLEY SYSTEM CROWD CONTROL STANCHION

1 A membrane attached to the bottom block assembly provides a seal between said bottom  
2 lock assembly and the post. This permits pneumatic braking when the guidance tape is being  
3 retracted.

4 The pulley stanchion system which I describe has the advantages that (1) it removes the  
5 complexity of spring mechanisms, (2) it uses gravity to provide a constant force over the entire  
6 extension range of the guidance tape, (3) in its natural configuration the extendible guidance tape  
7 is extended in an horizontal aspect, thus reducing curling, (4) the bottom block assembly with  
8 membrane act as a piston, providing simple and efficient pneumatic braking when the guidance  
9 tape is being retracted and (5) the guidance tape is stored as multiple linear plies within the  
10 length of the stanchion tube rather than on a bulky circular reel.

### DESCRIPTION OF THE DRAWINGS

11  
12 FIG. 1 is a perspective view of the stanchion showing.

13 FIG. 2 is a side view of the tape storage/pulley mechanism showing the path extendible  
14 guidance tape follows through the rollers of top block assembly and bottom block assembly.

15 FIG. 3 is a side view of the mechanism showing the disposition of the top and bottom  
16 pulley mechanisms and their associated rollers relative to the stanchion post.

17 FIG. 4 is a front view of top and bottom block assemblies including blocks and rollers.

18 FIG. 5 is a front view of top and bottom pulley mechanism showing tape and snap end.

19 FIG. 6 is a partial view of top block, post, and top roller, showing how top surface of top  
20 roller clears the top rim of stanchion post.

21 FIG. 7 is a side view of top block assembly.

22 FIG. 8 is a front view of top block assembly.

23 FIG. 9 is a top view of top block assembly showing attachment ring.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

24  
25 FIG. 1 shows a perspective view the preferred embodiment of my invention. The stanchion  
26 comprises a base 12 attached to a post 10. Extending from top assembly 8 is tape 2. At the end  
27 of tape 2 is snap end 1.

28 I have found that an 18 gauge 2 inch diameter tube 34 inches in length attached to an 14  
29 inch diameter base are a suitable post and base combination.

30 A variety of means may be used to attach the post to the base. One method is to weld the  
31 post to the base. An other method is to have a threaded hole in the base and, in the tube, a tube  
32 connector such as Gabriel Glide Co.'s 302-2000-06-18. A threaded stud can thus be used to  
33 attach the tube to the base. With this method, the post can be screwed onto, and unscrewed from,  
34 the base for ease of storage and transportation. The specific method of attachment is not  
35 important except that the base should provide a relatively air tight seal at the bottom of the post  
36 so that pneumatic braking may be used to slow the descent rate of the bottom block, and hence  
37 the tape retraction speed.

### WEIGHTED PULLEY SYSTEM CROWD CONTROL STANCHION

Fixed to the top of post **10** is top block assembly **8**. Visible in FIG. 1 is the attachment ring part of top assembly **8**. Decorative finial **14** is shown on top of top block assembly **8**. Extending from top block assembly **8** is tape **2**. Snap end **1** is attached to tape **2**. In the normal use of the stanchion, tape **2** is extended and snap end **1** is snapped onto the attachment ring of a second stanchion or onto a wall mounted ring.

FIG 2 shows how the components of the pulley system are disposed relative to each other and the path that tape **2** follows. Tape **2** passes over top assembly top roller **3**, under bottom assembly bottom roller **7**, over top assembly middle roller **4**, under bottom assembly top roller ~~**8**~~, over top assembly bottom roller ~~**6**~~, and finally is attached to the top of bottom block assembly **9**. From FIG 2 it can be seen that the rollers comprising each block assemblies are of different diameters. This permits the multiple plies of tape to avoid touching. This configuration reduces friction when the tape is being extended or retracted. FIG. 3 shows how the components are disposed internally to post **10**.

Top block assembly is seated on the top rim of post **10** and bottom block assembly **9** is contained within post **10**. Tape **2** is contained within the post **10** laced as multiple plies between top and bottom block assemblies. In the preferred embodiment, there are five plies of tape. Tape **2** will extend or retract five inches for every inch that bottom block assembly rises or falls within post **10**. I have found that a 6.5 inch long bottom block assembly used in conjunction with the depicted top block assembly has, within a 34 inch long tube, a range of vertical movement of about 2 foot. This provides a maximum tape extension of approximately 10 feet.

FIG. 3 and FIG. 6 show how the top roller **3** is disposed relative to the top rim of post **10**. Top assembly **8** has a flange or lip which seats assembly **8** on the top rim of post **10** such that the top of roller **3** is above the rim of post **10**. This permits tape **2** to exit from top block assembly **8** over the rim of post **10** without touching post **10**. FIG. 3 also shows a small screw **16** (such as a #8 machine screw 3/8 inches long) used to attach top block assembly **8** to post **10**. FIG. 2 shows hole **15** into which screw **16** is threaded.

FIG. 7 and FIG. 8 show side and front views of top block assembly **8** with rollers **3**, **4**, and **5**. FIG. 9 shows a top view of the preferred ring design of top block assembly **8**.

The bottom block assembly must be of sufficient weight to provide sufficient tension to keep the extendible tape taut when extended and to overcome frictional forces when the tape is retracted. I have found that an steel bottom block assembly having overall length of 6.5 inches and 1.87 inch diameter weighs approximately 3.8 lbs. and serves well. The exact weight is not critical.

Attached to the bottom is a circular membrane to provide a seal between the bottom block assembly and the interior wall of the tube. The membrane slows the escape of air from the space between the bottom of the block assembly and the bottom of the tube when the block assembly descends, thus slowing the rate of descent of the bottom block assembly. The art of pistons and

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# WEIGHTED PULLEY SYSTEM CROWD CONTROL STANCHION

1 sealing pistons is well understood. I have found that a 2 inch diameter disk of tempo nylon  
2 velour material serves to slow the descent of the bottom block assembly.

3 Those skilled in the art will understand that although the embodiment described here uses a  
4 pulley system with five plies of tape, alternative configurations are possible with a different  
5 number of plies. They will also understand that although I have described the top block  
6 assembly as comprising a ring and means for attaching a decorative finial, other configurations  
7 are possible. For example, it would be possible to integrate the decorative final as part of the top  
8 block assembly, or to dispense with a decorative finial completely and provide the top block  
9 assembly with a finished, flat, top. Also, although I have described a snap end and attachment  
10 ring as the means of attaching the extendible tape to a companion stanchion, other attachment  
11 means are possible. Also, the attachment ring can be a separate component distinct from the top  
12 block assembly.



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**WEIGHTED PULLEY SYSTEM CROWD CONTROL STANCHION**

1 I claim:

- 2 1. An extendible guidance tape crowd control stanchion comprising (a) a base, (b) a post  
3 attached to said base, (c) a fixed top block assembly attached to said post, said top block  
4 assembly comprising a plurality of rollers, (b) a movable bottom block assembly contained  
5 within said post, said bottom block assembly comprising a plurality of rollers and a weight,  
6 (d) an extendible and retractable guidance tape laced between said top block assembly and  
7 said bottom block assembly, said guidance tape comprising a tape and means for attaching  
8 said tape.
- 9 2. In a crowd control stanchion having an extendible and retractable guidance tape, the  
10 improvement comprising  
11 gravitational means for maintaining tape tension when said guidance tape is extended  
12 and for retracting said guidance tape.
- 13 3. A crowd control stanchion according to claim 2 where said gravitational means for  
14 maintaining guidance tape tension and retracting said guidance tape comprises a weighted  
15 pulley system.
- 16 4. A crowd control stanchion according to claim 3 where said pulley system comprises (a) a  
17 fixed top block assembly comprising a plurality of rollers and (b) a movable bottom block  
18 assembly comprising a plurality of rollers and a weight.

Figure 1

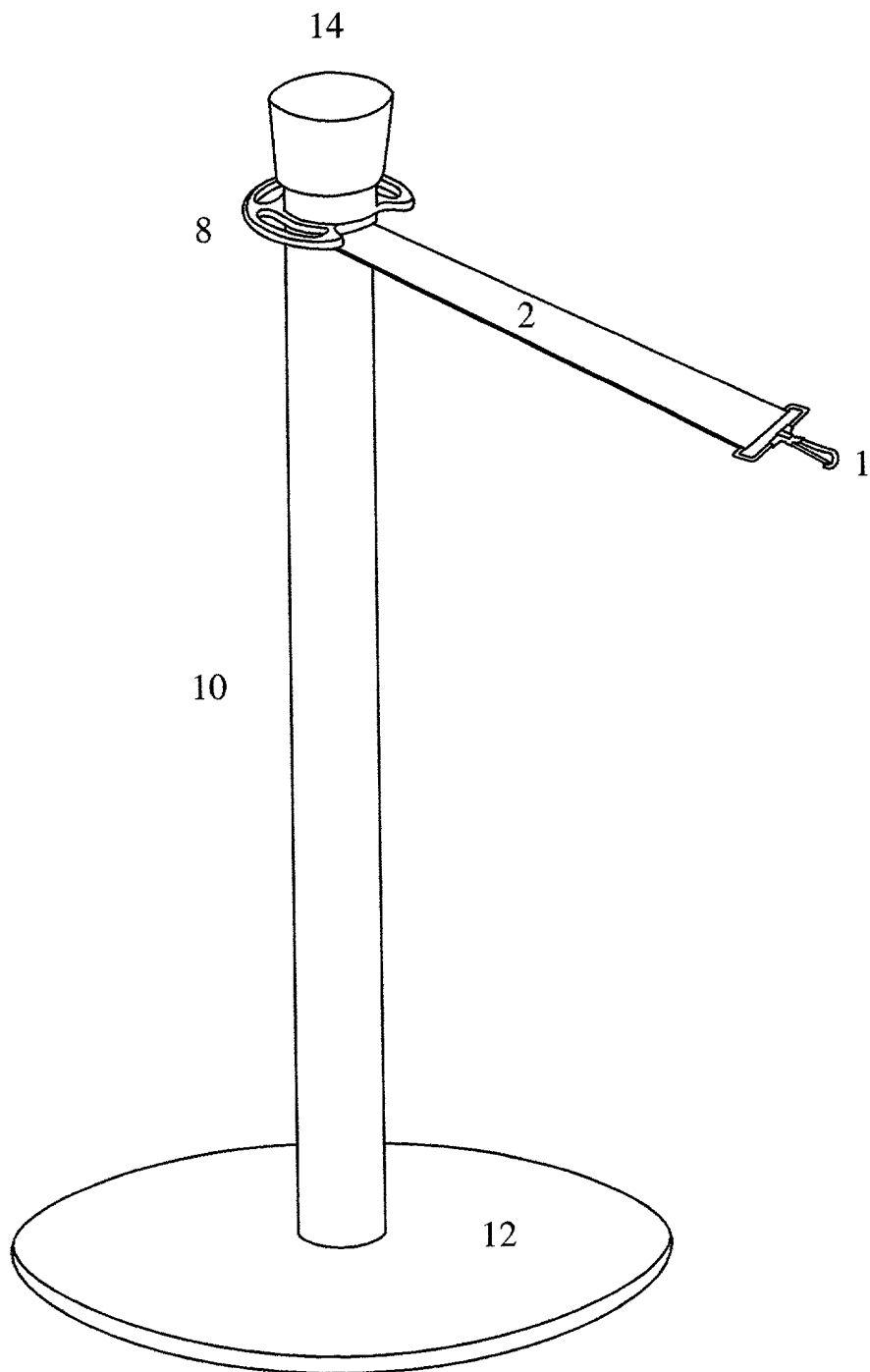
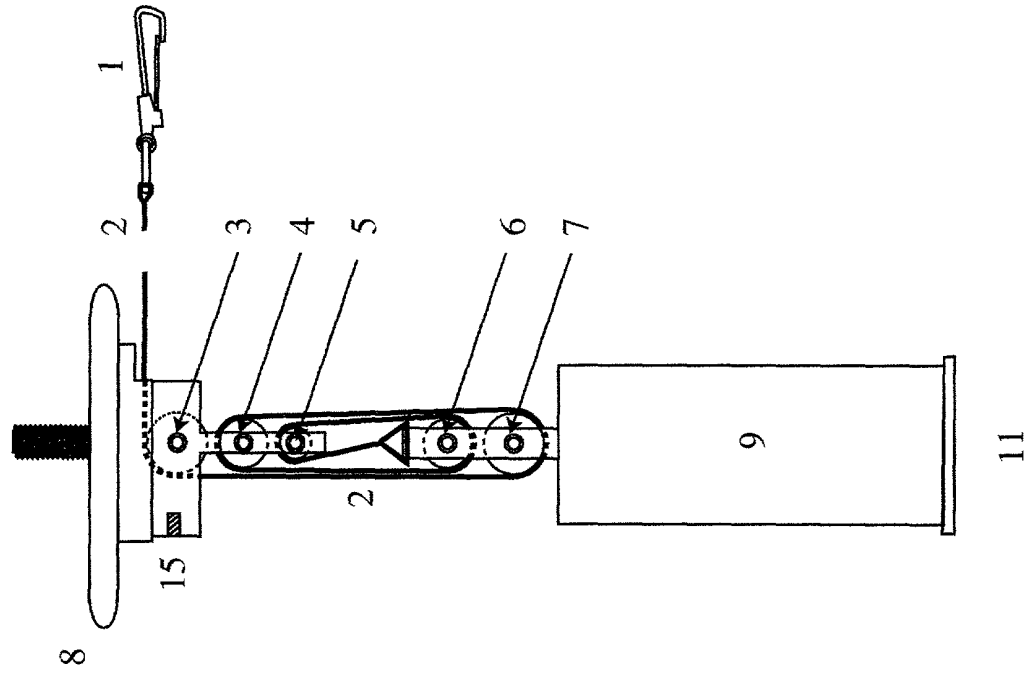


Figure 2



### Figure 3

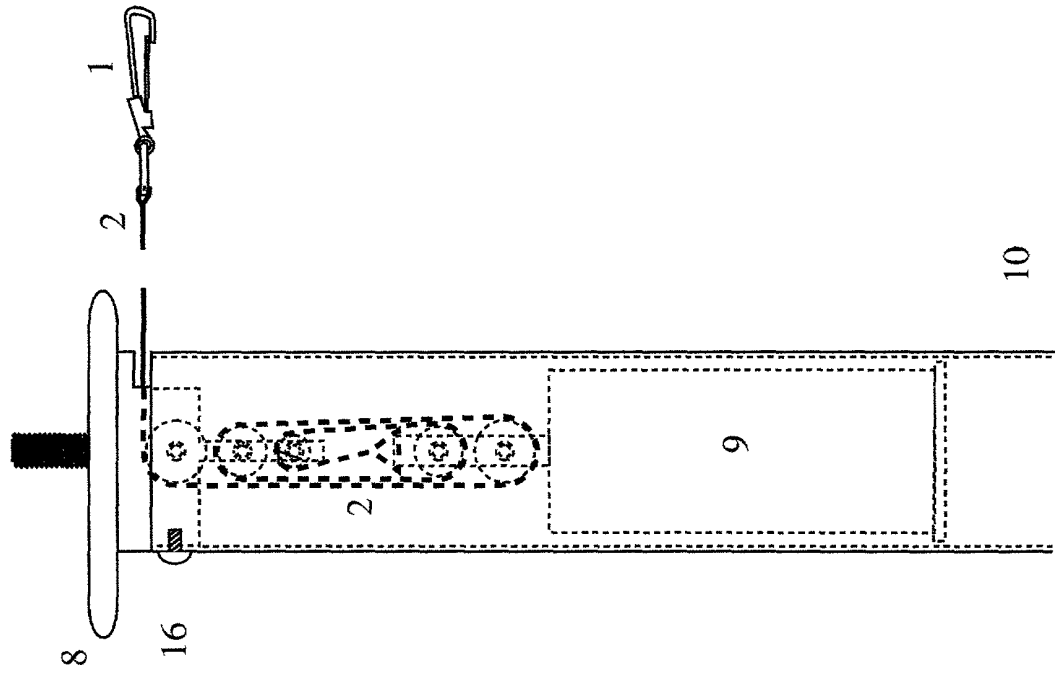


Figure 4

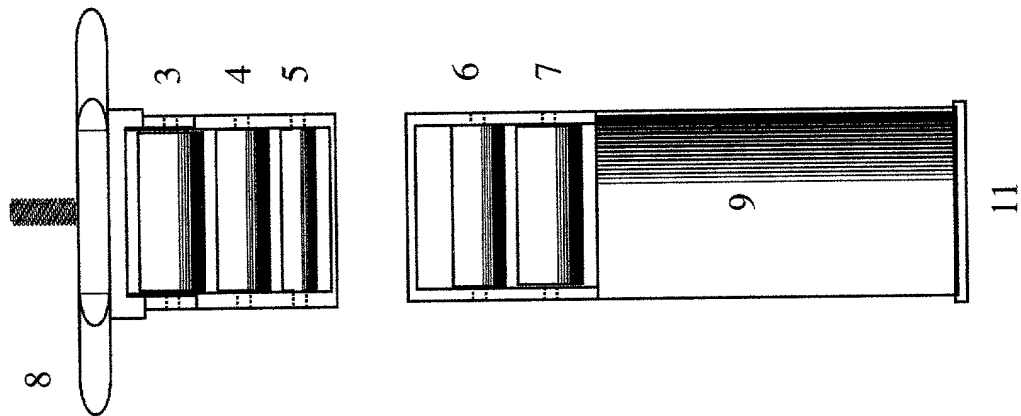


Figure 5

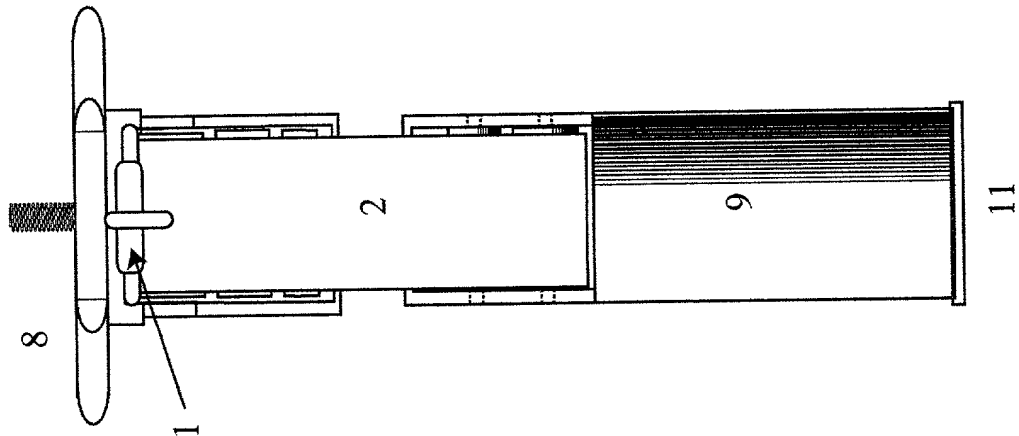


Figure 6

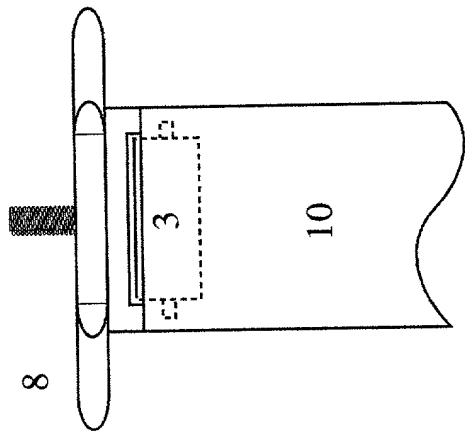


Figure 7

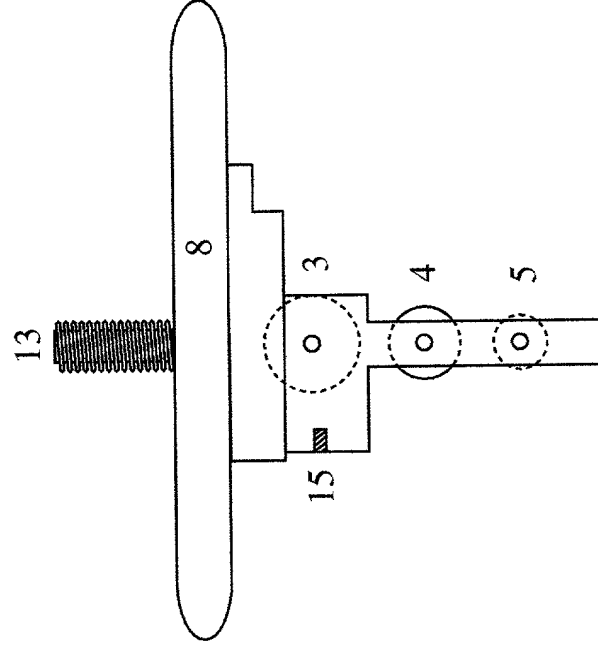


Figure 8

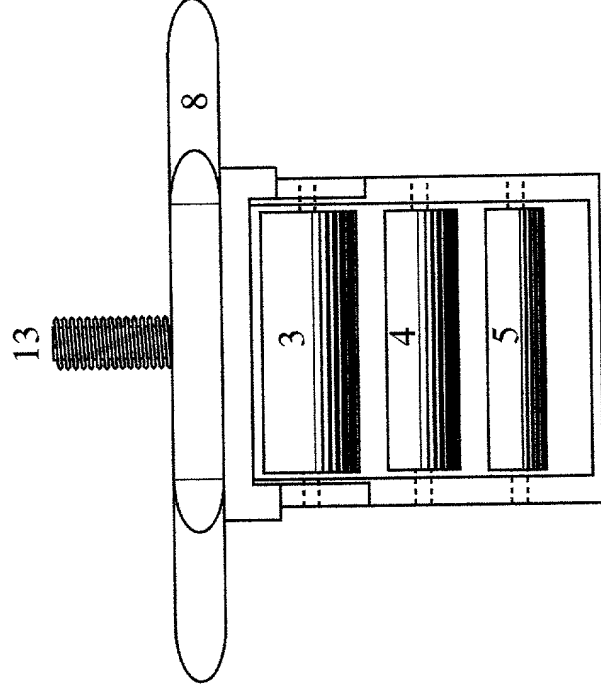
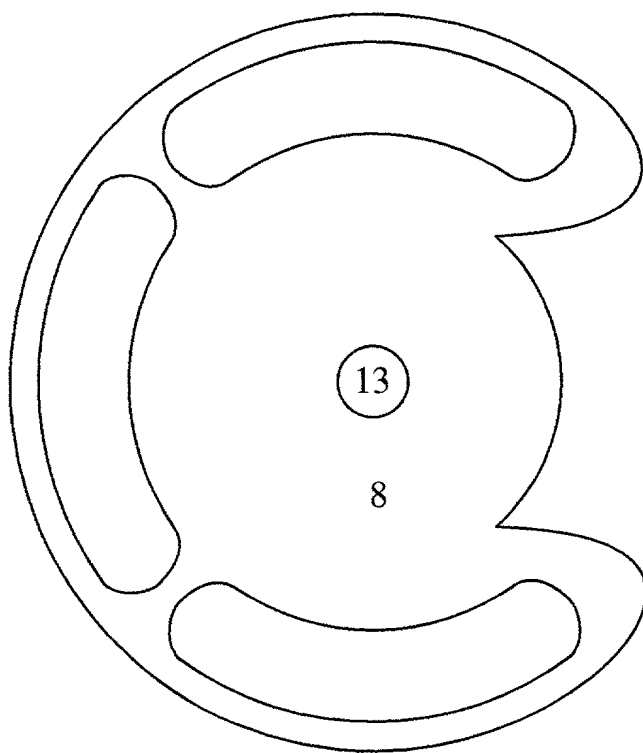



Figure 9



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I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

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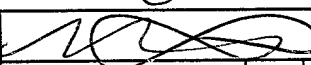
OR ☒ Correspondence address below

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon

Name of Sole or First Inventor:

☐ A petition has been filed for this unsigned inventor

Given Name (first and middle (if any))		Family Name or Surname					
HUGH G		LOEBNER					
Inventor's Signature			Date	10/10/00			
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Post Office Address	220 W 98 <sup>th</sup> ST #2B						
Post Office Address							
City	NY	State	NY	ZIP	10025	Country	US

☐ Additional inventors are being named on the \_\_\_\_\_ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto

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(37 CFR 1.63)**

☒ Declaration Submitted with Initial Filing **OR** ☐ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

**Attorney Docket Number**

**First Named Inventor**

HUGH LOSBNER

**COMPLETE IF KNOWN**

**Application Number**

/

**Filing Date**

**Group Art Unit**

**Examiner Name**

**As a below named inventor, I hereby declare that:**

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Weighted Polley System Crowd Control Stanchion

the specification of which (Title of the Invention)

☒ is attached hereto

OR

☐ was filed on (MM/DD/YYYY) as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
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			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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